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Characteristics of good quality pharmaceutical services common to community pharmacies and dispensing general practices

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Ms Grey was the research officer on the project. She collected the data, drafted the original article, critically reviewed all subsequent versions and agrees to be accountable for all aspects of the work in terms of accuracy and integrity of reported findings and their interpretation.

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Professor Rodham was involved in the conception and design of the work, was a collaborator on the research grant application and was involved in the analysis and interpretation of the data. She critically reviewed all versions of the article and agrees to be accountable for all aspects of the work in terms of accuracy and integrity of reported findings and their interpretation.

Professor Weiss was involved in the conception and design of the work, was the lead investigator on the research grant application and was involved in the analysis and interpretation of the data. She critically reviewed all versions of the article and agrees to be accountable for all aspects of the work in terms of accuracy and integrity of reported findings and their interpretation.

ABSTRACT

Background: In the United Kingdom pharmaceutical services can be delivered by both community pharmacies (CPs) and dispensing doctor practices (DPs). Both must adhere to minimum standards set out in NHS regulations however no common framework exists to guide quality improvement. Previous phases of this research had developed a set of characteristics indicative of good pharmaceutical service provision.

Objective: To ask key stakeholders to confirm, and rank the importance of, a set of characteristics of good pharmaceutical service provision.

Methods: A two-round Delphi-type survey was conducted in South-West England and was sent to participants representing three stakeholder groups: DPs, CPs and patients/lay members. Participants were asked to confirm, and rank, the importance of these characteristics as representing good quality pharmaceutical services.

Key Findings: Thirty people were sent the first round survey; 22 participants completed both rounds. Median ratings for the 23 characteristics showed that all were seen to represent important aspects of pharmaceutical service provision. Participants' comments highlighted potential problems with the practicality of the characteristics. Characteristics relating to patient safety were deemed to be the most important and those relating to public health the least important.

Conclusions: A set of 23 characteristics for providing good pharmaceutical services in CPs and DPs was developed and attained approval from a sample of stakeholders. With further testing and wider discussion it is hoped that the characteristics will form the basis of a quality improvement tool for CPs and DPs.

Keywords

Community pharmacy; dispensing doctor; health services quality; pharmacy services; quality improvement

INTRODUCTION

In the UK, primary care pharmaceutical services can be provided by both community pharmacies (CPs) and dispensing doctor practices (DPs). DPs are general medical practices that are able to provide pharmaceutical services to patients who live in an area 'rural in character ... more than one mile (1.6km) from a pharmacy's premises' [1]. Both CPs and DPs have to meet minimum standards of service provision set out in the National Health Services Pharmaceutical Services Regulations [2]. However, separate reimbursement schemes and monitoring procedures exist for each provider. In England, the NHS uses the Community Pharmacy Assurance Framework (CPAF) [3] to assess CPs' compliance with the community pharmacy contractual framework. Most DPs opt to participate in the separate Dispensary Services Quality Scheme (DSQS) [4].

The CPAF and DSQS focus on ensuring CPs and DPs comply with a baseline level of quality. However, the areas of service provision that focus on quality improvement (beyond a minimum baseline) are not tightly regulated and are thus open to interpretation by individual providers. With the exception of the focus group study of Halsall et al. [5] exploring quality in community pharmacy, there has been very little work investigating ideal practice or the characteristics of good pharmaceutical quality provision. This could both help guide service providers in striving to improve quality and be used to inform a series of indicators suitable for judging the quality of pharmaceutical service provision beyond a minimum baseline. In addition, a common set of characteristics for CPs and DPs would help to ensure equity of service provision to patients, regardless of where they receive pharmaceutical services.

The aim of this research was to develop a set of characteristics of good pharmaceutical services, (focusing on service provision beyond the baseline level required by all providers), that could be further refined into a quality improvement tool for use in both CPs and DPs. The research was conducted in three phases, using a mixed-methods approach. The first two phases (surveys and case studies of CPs and DPs) highlighted the overall similarity between CPs and DPs with regards to

pharmaceutical service provision [6], finding as much variation within groups (CP and DP) as between. The first two phases led to the identification of a set of good service characteristics. The third phase, reported here, involved a Delphi-type, two-round survey with key stakeholders, asking them to confirm and rank the importance of these characteristics.

METHOD

Ethical approval for all three phases of the research was granted by the Southmead NHS Ethics Committee on 31/08/11 (ref 11/SW/0203). Phase 1 used a postal questionnaire to CPs and DPs to identify the services provided, areas of commonality and difference between CPs and DPs in service provision and any monitoring systems in place to record services. These findings informed Phase 2 of the research in which in-depth case studies of three CPs and four DPs took place. These were thematically analysed [7] to investigate how the different procedures, systems and staff dynamics at each site affected service provision over time. Through comparison and collation of data, the main overall themes that related to quality of service provision were identified. These findings have been published elsewhere [6].

From these Phase 1 and 2 findings, the research team drew up an initial set of 22 characteristics of good quality pharmaceutical service. The characteristics related to four broad categories: patient safety and dispensing; patient-provider interaction; workplace culture; and public health. A two-round Delphi-type survey using the approach described by Hasson et al [8] was then conducted over 5 weeks in 2013, asking key stakeholders to confirm and rank the importance of the characteristics identified. Participants for the Delphi-type survey were selected purposively to represent the views of community pharmacists, dispensing GPs, dispensing staff at CPs and DPs, board members of CP and DP professional organisations and lay persons. Invitations were also sent to relevant professional organisations and two large, chain pharmacy companies.

Delphi participants could complete the surveys online or be posted paper copies. To protect anonymity, participant group (pharmacist, GP, lay) was recorded but all other identifying information was removed. In the first round of the survey, participants were presented with the characteristics along with a brief description of what good engagement with each would look like in practice (Figure 1). Participants were asked to rate, on a scale of one to nine, the extent to which they agreed each characteristic represented an important aspect of providing a good quality pharmaceutical service (1 = completely disagree, 9 = completely agree). Participants were also invited to comment on characteristics or suggest improvements.

In the second round, participants were provided with the median scores for each characteristic from round one. They were asked to rate the extent to which they agreed each characteristic represented an important aspect of good quality pharmaceutical service provision. Participants were asked to rank the characteristics within each of the four main categories in order of importance. Finally, they were asked to place those four categories in order of importance for pharmaceutical service quality. Data were entered in PASW Statistics-18 software for analysis. Free text comments were subject to content analysis: a list of categories derived from the data and research questions was drawn up and data were systematically coded into these categories [9].

RESULTS

Thirty-five people were directly contacted by the research team and invited to participate in the Delphi. Several individuals also circulated the invitation within their organisations to colleagues, making it impossible to calculate a response rate. Table 1 details how many people from each stakeholder group were *directly* contacted by the research team.

Thirty people expressed a willingness to participate in the Delphi. Twenty-three participants completed the first round and were sent the second round survey, of these one failed to complete

the second survey. Table 1 displays the numbers of surveys sent and completed for each stakeholder group.

Median ratings of the characteristics are given in Table 2. In general the median ratings remained the same across both rounds and all but one received a median rating of 7 or more. Several characteristics received a wide range of ratings and the ranges did not decrease in round two, indeed for some characteristics the diversity of ratings increased in the second round. However, taking a definition of disagreement used in similar Delphi-type studies [10] of 30% or more of ratings in both the 1-3 and 7-9 tertiles, there was not sufficient disagreement among participants for any of the characteristics to be discounted.

Participants were asked to place the characteristics within each category in order of importance for delivering pharmaceutical services. The mean rank assigned to each indicator was used to determine the overall order of characteristics. The characteristics are displayed in Table 2 in their final order of perceived importance, with the mean ranks given in the final column.

Finally, participants ranked the four categories of characteristics in order of importance for quality of pharmaceutical services (1 = most important):

1. Patient safety and dispensing (mean rank = 1.05)
2. Patient-provider interaction (mean rank = 2.27)
3. Workplace culture (mean rank = 3.14)
4. Public health (mean rank = 3.55)

Participants were not asked to rank all the characteristics across all groups (i.e. all 23 characteristics in rank order) and so, for example, the top rated characteristic in the patient-provider interaction category may not have been seen as less important than the bottom rated characteristic of the patient safety and dispensing category.

Qualitative responses

120 Respondents were encouraged to offer comments on each of the characteristics. Although a diverse
121 range of opinions were expressed, there were no clear differences in the types of comments
122 expressed by the different respondent groups. That is, community pharmacists were not evidently
123 more favourable or negative towards particular characteristics than dispensing doctors or lay
124 respondents.

125 *Patient Safety and Dispensing*

126 All participants agreed that all staff members need to be involved in ensuring a culture of patient
127 safety and should be encouraged to reflect on the safety of current processes. However, there was
128 less agreement over the value of SOPs in helping to ensure safe practice, with some questioning
129 their usability:

130 *“They are a good set of ideals ... their shortfall is the detail. The volume and individual steps*
131 *are impossible to retain exactly and to practice exactly.” (Community pharmacist 2)*

132 There were also differences in opinions on how prescriptions should be checked, with some
133 participants viewing double checking (where a dispensed prescription is checked by two members of
134 staff) as the only correct way to practice and others feeling that, as long as systems are in place to
135 prevent errors (such as ensuring a gap is left between assembling and conducting the final check on
136 a prescription), single checking is acceptable. Although all participants agreed that interruptions
137 during dispensing heightened the risk of error, a few felt that the suggestion to keep interruptions to
138 a minimum could be misinterpreted or would be unfeasible:

139 *“Not always practical as pharmacists are unable to avoid interaction with the public. Design*
140 *of modern open plan dispensaries makes this even more difficult. ” (Community pharmacy*
141 *Executive 1)*

142 All participants agreed that recording and reflecting on errors and near misses is important;
143 unfortunately some of the participants working in CPs and DPs reported that there was a tendency
144 to blame individuals, which prevented reporting and learning from errors.

145 *Patient-provider interaction*

146 Most participants strongly agreed with the importance of demonstrating a patient-centred ethos.
147 Only one participant disagreed, feeling that patients needed to take more responsibility for their
148 health. One participant disagreed with the importance of staff ensuring patients understand why
149 and how to take their medications, believing this to be the prescriber's role.

150 Although a few participants felt that staff training on communication would not be feasible in
151 smaller practices, several highlighted the importance of good staff-patient communication, not only
152 for business purposes but also for ensuring treatment adherence and picking up on potential
153 problems:

154 *"It is an important role that can influence patient's compliance and identify possible*
155 *problems. I'm not sure this is given a high enough priority in dispensaries but it will become*
156 *more essential as the population ages." (Lay member 1)*

157 Engaging with patients to ensure good customer service was agreed to be important by all but
158 several people disagreed with the need for a SOP on handling times when staff are unable to
159 immediately deal with a patient:

160 *"I don't think customers mind waiting as long as they can see you are not just talking about*
161 *what you had for dinner last night. You make it known you have seen them by smiling at*
162 *them and saying 'I will be with you soon'." (CP dispensing assistant 1)*

163 *"We do acknowledge patients but I do not believe there is a SOP. That might be an excessive*
164 *micro-SOP. It's just good manners really. (Community Pharmacist 8)*

165 The service characteristic concerning medicines use reviews (MURs) and dispensing reviews of use of
166 medicines (DRUMs) was divisive: several participants agreed that these checks should only be
167 carried out with patients whom staff believe would benefit from a review. However, some
168 participants pointed out that it is hard to tell the potential value of a review beforehand:

169 *“You often don’t know the full benefit till you start the consultation with the patient and*
170 *appreciate their unspoken needs.” (Community pharmacist 3)*

171 However, if staff have the freedom to decide when to conduct an MUR, the fear was that they might
172 not conduct any.

173 *A member of staff who is pressed for time may decide that there is nothing to be gained by*
174 *conducting a MUR / DRUM, whereas the patient might clearly benefit from one. (Lay*
175 *member 2)*

176 *Workplace culture*

177 All participants agreed that having established methods of communication among staff is important
178 for providing good quality service. Promoting an ethos where staff feel able to make suggestions for
179 improvements and to learn about other providers’ systems was generally deemed important.
180 Training and CPD were mostly acknowledged as important for providing *“better qualified staff, more*
181 *self-confidence and job satisfaction, and better patient care” (Community pharmacist 4)*. However,
182 several of the participants reported that some mandatory courses had been irrelevant and they
183 could not see how study time could be integrated into an already busy schedule.

184 Linking up with other providers to share knowledge and experience was seen as something to aim
185 for, but unlikely to happen due to time pressures, confidentiality regulations and, possibly,
186 competition for business hindering attempts to work together:

187 *“Good idea.... But for a busy GP practice with several different pharmacies surrounding it....*
188 *[I] question the practicality” (Community Pharmacy Executive 2)*

189 *Public health*

190 While the majority of participants felt that it was important for all staff in a CP or DP dispensary to
191 be able to provide up-to-date public health information, two participants felt that this was the role
192 only of the pharmacist, practice nurse or GP. Overall, the public health characteristics were seen as
193 less important than those in the other categories, with several participants viewing public health as
194 ‘secondary’ or ‘peripheral’ to pharmaceutical services. So, although having well-presented
195 information of available services was seen as ideal and *“a good place to give health advice”*
196 *(Dispensing GP 2)*, this should not be *“at the expense of (for example) a well-stocked pharmacy” (Lay*
197 *member 2)*. On the other hand, there were also several comments highlighting that health
198 promotion is an *“increasingly important role” (Community pharmacist 5)* for all staff in primary care.
199 A lack of space was reported as a common barrier to providing better health promotion and public
200 health services.

201 **DISCUSSION**

202 The study addressed areas of service provision that focus on quality improvement beyond a
203 minimum baseline that are not tightly regulated and therefore are open to interpretation by
204 individual providers. Of the 23 characteristics investigated, all were rated as being important aspects
205 of pharmaceutical service provision, with characteristics relating to patient safety perceived to be
206 the most important. This study is the first to characterise the quality of pharmaceutical service
207 provision across both CPs and DPs.

208 All the characteristics identified were retained as being important throughout the Delphi, and it may
209 be that it was not possible for respondents to make distinctions between the different
210 characteristics in terms of assessing importance. This was a relatively small study and, despite

211 attempts to fairly represent both DPs and CPs, only two dispensing GPs completed both rounds of
212 the survey with no one from Dispensing Doctor Organisations participating. However, development
213 of the characteristics was informed by previous phases of the research which had involved more
214 DPs. While the characteristics were largely based on findings from the South West of England, six
215 national primary care organisations were involved in the Delphi rounds.

216 General conceptual frameworks of quality in primary care have previously been developed [11]. In
217 community pharmacy, Halsall et al. used a Donabedian framework to analyse focus group
218 discussions with pharmacy users and staff [5]. They identified the three interdependent dimensions
219 of accessibility, effectiveness and positive perceptions of the experience as characterising quality in a
220 community pharmacy setting [5]. The current study adopted a different approach to Halsall et al., to
221 inductively triangulate a variety of qualitative and quantitative data, involving both CPs and DPs, and
222 focusing on quality above a minimum baseline.

223 The ambivalence towards public health practices revealed in participants' comments seems
224 particularly noteworthy given the United Kingdom Department of Health's current emphasis on
225 health promotion and shift towards preventive care [12]. There seemed to be a belief among some
226 participants that, although public health and health promotion campaigns were important, they
227 were not within the remit of primary care. The need for better acknowledgement by primary care
228 practitioners of their role in public health has been reported previously [13]. While primary care
229 professional bodies have produced resources to help practices increase their involvement in public
230 health [14, 15], more action needs to be taken if the Department of Health's aims are to be met.

231 In addition to investigating the applicability of these characteristics in a wider population of CPs and
232 DPs, further work is needed to develop and test a tool, based on the characteristics, that helps staff
233 at CPs and DPs to identify areas where quality could be improved and then to make changes to
234 practice. It is important to bear in mind, however, that assessing performance can lead to
235 dysfunctional consequences [16] called 'measurement fixation': where staff focus solely on meeting

specific targets rather than understanding the ‘spirit’ of the characteristic. While some of the characteristics might be easily assessed using traditional measures (such as number of dispensing errors), it has been the aim of the research team, in agreement with recommendations by the King’s Fund [17], not to ignore those aspects of quality that are less easily quantifiable, such as culture, ethos and morale. Therefore innovative qualitative methods are also called for. Examples suggested include “mystery shopper”-style visits to assess specific aspects of patient-provider interaction and health promotion, random spot checks to assess staff understanding of SOPs, auditing the reasons behind un-filled prescriptions, and keeping minutes of staff meetings to review errors. It will be important to ascertain what form of quality improvement resource service providers would find most useful. For example, a reflective framework, similar to the Manchester Patient Safety Framework [18], could provide users with descriptions of what increasing quality looks like on each of the characteristics found in the present study.

CONCLUSION

A set of 23 characteristics defining good quality pharmaceutical service provision in DPs and CPs has been developed, covering patient safety and dispensing, patient-provider interaction, workplace culture, and public health. These findings suggest that the characteristics, devised from two earlier phases of the research, were agreed by our participants to represent important aspects of providing good quality pharmaceutical services. Given the recent policy emphasis on patient safety, it is unsurprising that patient safety was perceived to be the most important aspect of good quality pharmaceutical service provision. However, it is interesting to note that some respondents were ambivalent about the importance of public health, a view at odds with current health policy initiatives and the increasing role of the pharmacist. Further work is needed to develop a tool to guide quality improvement. This could take the form of a reflective resource for service providers that will help them identify areas where quality could be improved and ultimately help them make changes to their practice that promotes quality.

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 310

Figure 1. Example characteristic with description

Characteristic: The Practice demonstrates effective methods of internal staff communication.

Description: There are agreed methods for communicating different types of messages (e.g. new protocols will be listed on a noticeboard for all staff to sign when they have read them; issues that cannot be resolved that day concerning a particular prescription are to be noted in the diary for next staff etc.). These methods are documented in a standard operating procedure (SOP) and, if appropriate, the SOP is also displayed as a poster in the dispensary for the benefit of locum/new staff. Regular practice review meetings should be held with all staff present or receiving minutes. Staff feel that they are listened to by their colleagues. Staff are required to reflect on how effective the communication systems are within the team at least annually.

325
326

Table 1. Surveys sent and received by stakeholder group.

Stakeholder group	Number Contacted	First round surveys sent	First round surveys completed	Second round surveys completed
Dispensing GPs or practice managers	10	4	3	2
DP dispensers	-	1	0	-
Community pharmacists	8	9	8	8
CP dispensing assistants	1	2	2	2
DP organisation board members	4	4	0	-
CP organisation board members	-	1	1	1
Large chain CP executives	2	2	2	2
Lay	10	7	7	7
Total		30	23	22

327

328 N.B. Several of the people detailed in this table also circulated the invitation to their colleagues. In addition,
329 invitations were sent to general enquiry contact addresses for two CP organisations.

330

331	Table 2. Median and range of ratings of importance of characteristics for each round.						
332	Characteristics are displayed in rank order of importance within categories, mean rank given in						
333	final column. [where 1=completely disagree to 9 = completely agree]						
Service area category	Final rank	Characteristic	Round 1		Round 2		Mean rank
			Median rating	Range	Median rating	Range	
Patient safety and dispensing	1	There is a clear culture of safety in how the dispensing process is managed.	9.0	7-9	9.0	8-9	1.73
	2	The Practice has clear procedures for both second checking of prescriptions by another person (double checking) and second checking of one's own work (single checking).	9.0	5-9	9.0	1-9	2.95
	3	Standard operating procedures (SOPs) align with actual staff practice; they are reviewed annually and all staff understand and sign up to the importance of these procedures.	7.5	2-9	7.5	6-9	3.22
	4	Patient safety is a priority; dispensing staff are not interrupted while dispensing a prescription.	8.5	6-9	8.0	3-9	3.45
	5	The practice has clear SOPs for handling near-misses and dispensed errors. Errors and near-misses are recorded, reviewed and regularly discussed.	9.0	7-9	9.0	6-9	4.27
	6	Dispensary space is optimally designed to ensure efficient processing of prescriptions.	8.0	6-9	8.0	5-9	5.36
Patient-provider interaction	1	The practice demonstrates an ethos of patient-centred care, committed to "going the extra mile" for the patient.	9.0	6-9	9.0	2-9	2.41
	2	Staff ensure that all patients (and/or carers) understand why they should take their medicines, how to take them and any precautionary information.*	-	-	9.0	5-9	3.05
	3	The Practice / Pharmacy has effective and customer service-oriented methods of communicating with patients in one-to-one interactions.	8.0	1-9	8.0	3-9	3.32
	4	Each staff member demonstrates excellent customer service, working as a	8.5	6-9	9.0	5-9	3.45

		team to define and implement good service.					
	5	Staff are always aware of and acknowledge waiting patients.	7.5	5-9	7	4-9	3.77
	6	Practices conduct MURs / DRUMs** in a way that maximises patient benefit.	7.5	1-9	7	3-9	5.00
Workplace culture	1	The Practice demonstrates effective methods of internal staff communication.	8.0	1-9	8.0	6-9	2.55
	2	There is a culture of encouraging staff to improve internal procedures.	7.0	2-9	7.0	3-9	2.77
	3	The Practice / Pharmacy facilitates staff training with staff having access to, and knowing how to use, online resources.	7.0	5-9	8.0	4-9	2.91
	4	The Practice / Pharmacy makes an effort to develop and maintain relationships with other local health care providers.	7.0	5-9	8.0	4-9	3.77
	5	Staff actively engage in Continuing Professional Development (CPD).	7.5	4-9	7.0	1-9	4.77
	6	The pharmacy ensures that locum pharmacists are able to uphold the good working relationships between the pharmacy and local healthcare providers.***	8.0	5-9	8.0	2-9	4.95
	7	Sites link up to run DP and CP staff discussion groups on relevant issues.	6.5	1-9	6.0	1-9	6.27
Public health	1	Practice / Pharmacy staff are well equipped to provide essential public health advice.	8.0	1-9	8.0	3-9	2.18
	2	There is good use of patient waiting areas for health promotion and advice.	7.0	2-9	7.0	6-9	2.50
	3	Practices / Pharmacies proactively engage in health promotion.	7.0	4-5	7.0	5-9	2.64
	4	The services offered by the Practice / Pharmacy are clearly displayed.	7.0	2-9	7.0	5-9	2.68

334

335 *Characteristic added in round two

336 ** MURs = medicines use reviews, DRUMs = dispensing reviews of use of medicines; these are patient
337 consultations, conducted at CPs and DPs respectively, aiming assess how a patient is taking their medication
338 and if they are experiencing any problems.

339 ***This characteristic relates to CPs only.

340